

Application No. 09/865,763

Atty Docket No. 3COM 3611-1

**Amendments to the Specification**

On page 55, please amend the Abstract as shown below:

~~A method, and apparatus~~ A method and apparatus implementing the method, of selecting a bit load  $b$  for a channel in a carrier system. The carrier system encodes data based on a constellation of points. Each point represents a tuple of data. The constellation has a self-similarity property. The bit load for the channel is selected based on the self-similarity property of the constellation. In an alternate embodiment, the method and apparatus are used to determine the bit load of the sub-channels in a multi-carrier system.

On page 4, please amend line 10<sup>9</sup> as shown below:

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4/24/07

The assumption of an equally probable constellation decoding error yields an average fraction of erroneous bits that approaches  $\frac{1}{2}$  bits that approach  $\frac{1}{2}$  at large values of  $b$ . In other words, approximately half of the bits will be in error when a QAM symbol error occurs. This approach was earlier used in Proakis, p. 262 for  $2^b$ -ary orthogonal signals. However, this approach is not precise either. Because this assumption is used when determining the number of bits  $b$  per sub-channel, an improved method and apparatus are needed to select the number of bits per sub-channel. Furthermore, this assumption does not accommodate for fluctuations in the bit error rate. The method and apparatus should also accommodate for fluctuations in the bit error rate.

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On page 18, please amend line <sup>23-24</sup>~~24~~ as shown below:

Fig. 8 depicts a quarter of an 8-bit [a] constellation that has 256 constellation points.